AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) An apparatus for interrupting an electrical short circuit current in an electrical distribution system having a plurality of phases, the apparatus comprising:

a housing;

a plurality of separable conduction paths;

an operating mechanism in operable communication with the plurality of conduction paths;

an electronic trip unit in signal communication with each of the plurality of conduction paths and in operable communication with the operating mechanism; and

an electromagnetic trip unit in ~~signal~~ electromagnetic field communication with each of the plurality of conduction paths and in operable communication with the operating mechanism;

wherein the electromagnetic trip unit is configured to be operably responsive to a first half-cycle waveform of the short circuit current prior to the electronic trip unit being operably responsive to a subsequent second multi-cycle waveform of the short circuit current, each of the electromagnetic trip unit and the electronic trip unit being operably responsive by being capable of sending a trip signal to the operating mechanism in response to the first half-cycle waveform and the second multi-cycle waveform, respectively.

2. (original) The apparatus of Claim 1, wherein:

the electromagnetic trip unit comprises a magnetic actuator disposed at, and in signal communication with, each of the plurality of conduction paths such that each

magnetic actuator is individually in operable communication with the operating mechanism.

3. (original) The apparatus of Claim 2, wherein:

the electronic trip unit comprises a current sensor disposed at, and in signal communication with, each of the plurality of conduction paths.

4. (original) The apparatus of Claim 3, wherein:

the current sensor comprises a current transformer.

5. (original) The apparatus of Claim 2, wherein:

the electromagnetic trip unit comprises a magnetic yoke and a magnetic armature.

6. (original) The apparatus of Claim 1, wherein:

the plurality of conduction paths comprises a double-break contact structure.

7. (original) The apparatus of Claim 1, wherein:

the plurality of conduction paths comprises a blow open contact arm structure.

8. (original) The apparatus of Claim 7, wherein:

the blow open contact arm structure is configured to be operably responsive to the first half-cycle waveform of the short circuit current.

9. (original) The apparatus of Claim 8, wherein:

the blow open contact arm structure comprises a rotary contact bridge.

10. (original) The apparatus of Claim 1, wherein:

the plurality of conduction paths comprises a conduction path in each of three phases within the housing.

11. (original) The apparatus of Claim 10, wherein:

the electromagnetic trip unit comprises a single trip bar that is common to all of the three phases within the housing, each phase of the trip bar having a separate magnetic armature disposed thereat.

12. (original) The apparatus of Claim 1, wherein:

the electronic trip unit is configured to trip the operating mechanism at a lower trip threshold than the electromagnetic trip unit is configured to trip the operating mechanism.

13. (currently amended) A method of interrupting an electrical short circuit current in an electrical distribution system having a plurality of phases, comprising:

sensing the electrical short circuit current at an electronic trip unit in signal communication with each of a plurality of conduction paths and in operable communication with an operating mechanism;

sensing the electrical short circuit current at an electromagnetic trip unit in ~~signal~~ electromagnetic field communication with each of the plurality of conduction paths and in operable communication with the operating mechanism;

in response to a first half-cycle waveform of the electrical short circuit at the electromagnetic trip unit, tripping a circuit breaker to interrupt the electrical short circuit current therethrough;

wherein the electromagnetic trip unit is configured to be operably responsive to the first half-cycle waveform of the short circuit current prior to the electronic trip unit being operably responsive to a subsequent second multi-cycle waveform of the short circuit current, each of the electromagnetic trip unit and the electronic trip unit being

operably responsive by being capable of sending a trip signal to the operating mechanism in response to the first half-cycle waveform and the second multi-cycle waveform, respectively.

14. (original) The method of Claim 13, wherein the tripping a circuit breaker comprises tripping an operating mechanism in operable communication with a plurality of separable conduction paths.

15. (original) The method of Claim 13, wherein the tripping a circuit breaker comprises:

tripping a magnetic actuator disposed at, and in signal communication with, each of the plurality of conduction paths such that each magnetic actuator is individually in operable communication with the operating mechanism.

16. (original) The method of Claim 13, further comprising:

blowing open a contact arm structure of the plurality of conduction paths in response to the first half-cycle waveform of the short circuit current.

17. (original) The method of Claim 13, wherein the electronic trip unit is configured to trip the operating mechanism at a lower trip threshold than the electromagnetic trip unit is configured to trip the operating mechanism.

18. (currently amended) An electronic circuit breaker having a plurality of separable conduction paths and an operating mechanism in operable communication with the plurality of conduction paths, the circuit breaker comprising:

an electronic trip unit in signal communication with each of the plurality of conduction paths and in operable communication with the operating mechanism; and

an electromagnetic trip unit in ~~signal~~ electromagnetic field communication with each of the plurality of conduction paths and in operable communication with the operating mechanism;

wherein the electromagnetic trip unit is configured to be operably responsive to a first half-cycle waveform of the short circuit current prior to the electronic trip unit being operably responsive to a subsequent second multi-cycle waveform of the short circuit current, each of the electromagnetic trip unit and the electronic trip unit being operably responsive by being capable of sending a trip signal to the operating mechanism in response to the first half-cycle waveform and the second multi-cycle waveform, respectively.

19. (original) The circuit breaker of Claim 18, wherein:

the electromagnetic trip unit comprises a magnetic actuator disposed at, and in signal communication with, each of the plurality of conduction paths such that each magnetic actuator is individually in operable communication with the operating mechanism; and

the electronic trip unit comprises a current sensor disposed at, and in signal communication with, each of the plurality of conduction paths.

20. (original) The circuit breaker of Claim 19, wherein:

the current sensor comprises a current transformer; and

the electromagnetic trip unit comprises a magnetic yoke and a magnetic armature.

21. (original) The circuit breaker of Claim 18, wherein:

the electronic trip unit is configured to trip the operating mechanism at a lower trip threshold than the electromagnetic trip unit is configured to trip the operating mechanism.

22. (original) The circuit breaker of Claim 18, wherein:

the plurality of conduction paths comprises a double-break blow open contact arm structure; and

the blow open contact arm structure is configured to be operably responsive to the first half-cycle waveform of the short circuit current.

23. (original) The circuit breaker of Claim 21, wherein:

the circuit breaker comprises at least a two-pole circuit breaker; and

the electromagnetic trip unit comprises a single trip bar common to all phases wherein each phase of the trip bar has a separate magnetic armature disposed thereat.